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ABSTRACT

The Personal Preference Self-Description Questionnaire (PPSDQ) was developed to measure personal preferences as regards Jungian psychological types. Instruments in this area are among the most popular measures used in education and psychology; the measures are used in matching teaching and learning styles, in individual counseling and family therapy, in team building, in career planning, and in research in these and other areas. However, one challenge in using self-report measures is that some persons may fake responses or engage in undetected random responding. In both research and clinical applications, it can be important to distinguish such response patterns from legitimate profiles. The present study was conducted using data from 641 college students to investigate the characteristics of faking/random response scales for the PPSDQ. Four five-item scales were developed, one for each of the four PPSDQ constructs. These scales had expected psychometric properties. (Contains 2 tables, 4 figures, and 18 references.) (Author/SLD)

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Faking/Random Response Scales for the PPSDQ-93

Measure of Jungian Personality Types

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Paper presented at the annual meeting of the Southwestern Psychological Association, New Orleans, April 9, 1998. The senior author may be contacted through the Internet via Web address: **http://acs.tamu.edu/~bbt6147.**

ABSTRACT

The Personal Preferences Self-Description Questionnaire (PPSDQ) was developed to measure personal preferences as regards Jungian psychological types. Instruments in this area are among the most popular measures used in education and psychology; the measures are used in matching teaching and learning styles, in individual counseling and family therapy, in team building, in career planning, and in research in these and other areas. However, one challenge in using self-report measures is that some persons may fake responses or engage in undetected random responding. In both research and clinical applications, it can be important to distinguish such response patterns from legitimate profiles. The present study was conducted using data from 641 participants to investigate the characteristics of faking/random response scales for the PPSDQ.

Measures of psychological types are among the most frequently used measures (cf. Thompson & Ackerman, 1994) employed in education and other settings. For example, Jackson, Parker and Dipboye (1996) noted that one measure of Jungian types "is the most widely used personality instrument, with between 1.5 and 2 million persons completing it each year" (p. 99, emphasis added). More than 3 million copies of this measure were sold in 1993. As Yabroff (1990) noted, such measures have "brought Jung's typology to a high level of practical application" (p. 6). Personality type indicators are used in matching teaching and learning styles, in individual counseling and family therapy, in team building, in career planning, and in research in these and other areas.

Several factors seem to account for the popularity of measures of psychological type (McCaulley, 1990). First, unlike many personality measures, measures of type focus on *normal* variations in personality, and because by definition more people have normal as against abnormal personality, the measures may be useful with more people and in more situations than would be measures of psychopathology. Second, many people find that measures of type have enormous "face validity" for them, i.e., they understand the concepts implicit in the measures, tend to agree with and find appealing important aspects of type characterizations, and find the information to be useful, free of value judgments, and non-threatening.

One measure of type is the Personal Preferences Self-Description Questionnaire (PPSDQ), developed by the first author. The PPSDQ has undergone an iterative sequence of item development

and revision across a series of samples (cf. Arnau, Thompson, & Rosen, 1997; Kier & Thompson, 1997; Melancon & Thompson, 1994, 1996; Mittag, 1998; Thompson & Melancon, 1995, 1996a, 1996b, 1997; Thompson & Stone, 1994).

However, one challenge in using self-report measures of personality is that some persons may fake responses or engage in undetected random responding (cf. Allen, 1966; Wiggins, 1966). In both research and clinical applications, it can be important to distinguish such response patterns from legitimate profiles. The present study was conducted to investigate the characteristics of faking/random response scales for the PPSDQ.

Method

Participants

Data were collected from 641 students enrolled in a large public university or in a smaller private university. The mean age of the 641 participants was 23.2 (SD=7.7). There were more females (76.0%) than males in the sample. Most of the participants were non-minority students (70.8%), though there were representative proportions of African-American (12.6%) and Hispanic (10.3%) students in the sample as well.

Instrumentation

We administered the 93-item version of the Personal Preferences Self-Description Questionnaire (PPSDQ). The PPSDQ consists of both word-pair items and sentence items posited to mark each of four psychological dimensions: Extraversion-Introversion (EI), Sensing-iNtuition (SN), Thinking-Feeling (TF), and Judging-Perceiving (JP). The PPSDQ word-pair items are presented as

semantic differential scales with a "1" to "7" response format. The response format for the sentence items involves Likert scales indicating strongest disagreement ("1") to strongest agreement ("7").

Procedures

We composed a derived faking/random response scale by pairing PPSDQ items that were most highly inversely correlated within the sample of participants. For example, we paired semantic-differential items 26 ("Introvert-Extrovert") and 28 ("Mixer-Loner"), for which responses had a large negative correlation (r = -.5897), to create the first faking/random response item. Table 1 lists the correlations for the 40 paired PPSDQ items (10 per PPSDQ scale) use to create the 20 faking/random response items (five derived faking/random response items per scale).

INSERT TABLE 1 ABOUT HERE.

Each of these 20 faking/random response item pairs was scored "1" if responses on the two items in a given item pair were in the opposite direction, and differed by exactly 4 (out of a possible difference of 6, since PPSDQ item scores range from "1" to "7"). Each of these 20 faking/random response item pairs was scored "2" if responses were in the opposite direction, and differed by 5. Each of these 20 faking/random response item pairs was scored "3" if responses were in the opposite direction, and differed by 6. Otherwise, a given faking/random response item was scored "0". Thus, within each of the four PPSDQ scales, faking/random response scale scores ranged from "0" (5 x 0) to "15" (5 x 3).

Results

Table 2 presents the frequency distributions for each of the four faking/random response scales. As was theoretically expected, since most participants are presumed to be honest and reflective, the scores on the scales are highly skewed. On each of the four scales, roughly 2% of the participants had scores greater than 9 out of 15. Thus, cutoff scores of 10 or higher seem reasonable.

INSERT TABLE 2 ABOUT HERE.

The faking/random response score alphas for the four five-item scales were: EI, .86; SN, .76; TF, .76; and JP, .76. These values appear reasonable on five-item faking/random response scales that are inherently skewed and have inherently restricted range or variance, because it is greater variance that tends to lead to higher score reliability (cf. Reinhardt, 1996; Thompson, 1994).

Figures 1 through 4 present crosstabulations of scores on each of the faking/random response scales, potentially ranging from 0 to 15, with each person's count of the number of these scale scores that were greater than 9 (i.e., this count could range from 0 to 4). However, 592 (92.4%) people did not exceed the cutoff on any of the four faking/random response scales, 41 (6.4%) did so on only one scale, seven (1.1%) did so on two scales, and one (.2%) did so on three scales. No one exceeded the cutoff of all four scales.

INSERT FIGURES 1 THROUGH 4 ABOUT HERE.

Discussion

The present paper has reported the development of faking/random response scales for the Personal Preferences Self-Description Questionnaire (PPSDQ). Four five-item scales were developed, one for each of the four PPSDQ constructs. Each faking/random response scale was developed by pairing 10 items from a given PPSDQ scale, based on theory and empirically-grounded expectations that scores on a given item pair should be on opposite ends of the response continuum ("1" to "7").

The faking/random response scores took into account magnitudes of deviations within a given PPSDQ item pair. Responses within an item pair that diverged by only 3 or less were scored "0". Responses that differed by 4, 5, or 6 were scored "1", "2", or "3", respectively. Thus, the scales weighted responses by the degree of divergence.

The four faking/random response had expected psychometric properties. The scores were highly skewed, had limited variability, and had reasonable alpha coefficients given scale brevity (i.e., five scores per scale) and expected restricted range.

Of course, one thing that faking/random response scales such as the present one cannot do is distinguish people who are intentionally dissembling from those persons who are responding carelessly. However, random responses would generate only some discrepancies on a chance basis, while very extreme scores on these scales may require an intentional effort to mask true perceptions.

The tables and figures clearly indicate that the preponderance of persons tend to respond honestly and thoughtfully on the scales. The result suggests that findings in previous studies (cf. Arnau,

Thompson, & Rosen, 1997; Kier & Thompson, 1997; Melancon & Thompson, 1994, 1996; Mittag, 1998; Thompson & Melancon, 1995, 1996a, 1996b, 1997; Thompson & Stone, 1994) are based on data provided by participants responding in a thoughtful and honest manner.

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Table 1
40 PPSDQ Items Composing the 20 Lie/Random Response Items

Scale/ r	Item 1	Item 2
Extraversion-Introversion (EI)		
-.5897	mixerlon	xintrext
-.5190	congrecl	xsoliami
-.5161	persoshy	xquieexp
-.4833	socipriv	xrelaxso
-.4661	shyperso	xtalkoth
Sensing-iNtuition (SN)		
-.4783	planvisi	xinvenor
-.4415	precimag	xmechani
-.4174	practheo	xconcrea
-.3672	tradcrea	xdiverco
-.3254	concexpl	xvarirep
Thinking-Feeling (TF)		
-.5053	factcomp	xtendrat
-.4970	skeptrus	xgullsus
-.4424	dispemot	xfeelthi
-.4233	evalnonj	xaccedis
-.4111	loghuman	xempalog
Judging-Perceiving (JP)		
-.5228	lastminu	xhaterus
-.4290	promfree	ximpetas
-.4185	unexpect	xstrutim
-.4151	orderirr	xplanahe
-.4136	timerela	xflexorg

Table 2
Frequency Distributions of Lie/Random Response Scores

Scale/ Value	Frequency	Percent	Valid Percent	Cum Percent
EI				
0	215	33.5	33.5	33.5
1	106	16.5	16.5	50.1
2	68	10.6	10.6	60.7
3	67	10.5	10.5	71.1
4	51	8.0	8.0	79.1
5	41	6.4	6.4	85.5
6	22	3.4	3.4	88.9
7	19	3.0	3.0	91.9
8	18	2.8	2.8	94.7
9	14	2.2	2.2	96.9
10	**6**	**.9**	**.9**	**97.8**
11	4	.6	.6	98.4
12	4	.6	.6	99.1
13	3	.5	.5	99.5
14	2	.3	.3	99.8
15	1	.2	.2	100.0
Total	641	100.0	100.0	
SN				
0	244	38.1	38.1	38.1
1	125	19.5	19.5	57.6
2	90	14.0	14.0	71.6
3	57	8.9	8.9	80.5
4	46	7.2	7.2	87.7
5	26	4.1	4.1	91.7
6	17	2.7	2.7	94.4
7	12	1.9	1.9	96.3
8	5	.8	.8	97.0
9	7	1.1	1.1	98.1
10	**3**	**.5**	**.5**	**98.6**
11	1	.2	.2	98.8
12	4	.6	.6	99.4
13	1	.2	.2	99.5
14	2	.3	.3	99.8
15	1	.2	.2	100.0
Total	641	100.0	100.0	
TF				
0	231	36.0	36.0	36.0
1	113	17.6	17.6	53.7
2	94	14.7	14.7	68.3
3	57	8.9	8.9	77.2
4	43	6.7	6.7	83.9
5	31	4.8	4.8	88.8

6	27	4.2	4.2	93.0
7	16	2.5	2.5	95.5
8	12	1.9	1.9	97.3
9	5	.8	.8	98.1
10	**3**	**.5**	**.5**	**98.6**
11	6	.9	.9	99.5
12	1	.2	.2	99.7
13	1	.2	.2	99.8
15	1	.2	.2	100.0
Total	641	100.0	100.0	
JP				
0	166	25.9	25.9	25.9
1	151	23.6	23.6	49.5
2	101	15.8	15.8	65.2
3	60	9.4	9.4	74.6
4	51	8.0	8.0	82.5
5	35	5.5	5.5	88.0
6	24	3.7	3.7	91.7
7	21	3.3	3.3	95.0
8	8	1.2	1.2	96.3
9	10	1.6	1.6	97.8
10	**2**	**.3**	**.3**	**98.1**
11	4	.6	.6	98.8
12	5	.8	.8	99.5
13	1	.2	.2	99.7
14	1	.2	.2	99.8
15	1	.2	.2	100.0
Total	641	100.0	100.0	

Note. Lie/random response scale means on each of the four PPSDQ scales were EI = 2.53 (SD = 2.94); SN = 1.91 (SD = 2.47); TF = 2.11 (SD = 2.54); JP = 2.38 (SD = 2.61); LIETOTAL = 8.92 (SD = 7.64).

Figure 1
Lie/Random Response Scale Scores (EI) vs Count of Scores > 9

Count / LIEEI	LIECOUNT .00	1.00	2.00	3.00	Row Total
0	211	4			215 33.5
1	100	5	1		106 16.5
2	64	3	1		68 10.6
3	67				67 10.5
4	47	4			51 8.0
5	38	3			41 6.4
6	21	1			22 3.4
7	15	2	2		19 3.0
8	16	2			18 2.8
9	13	1			14 2.2
10		5	1		6 .9
11		4			4 .6
12		3		1	4 .6
13		2	1		3 .5
14		2			2 .3
15			1		1 .2
Column Total	592 92.4	41 6.4	7 1.1	1 .2	641 100.0

Figure 2
Lie/Random Response Scale Scores (SN) vs Count of Scores > 9

LIESN	Count	LIECOUNT .00	1.00	2.00	3.00	Row Total
	0	238	6			244 38.1
	1	124	1			125 19.5
	2	82	7	1		90 14.0
	3	53	4			57 8.9
	4	41	5			46 7.2
	5	23	3			26 4.1
	6	13	4			17 2.7
	7	8	4			12 1.9
	8	5				5 .8
	9	5	2			7 1.1
	10		2	1		3 .5
	11			1		1 .2
	12		2	2		4 .6
	13		1			1 .2
	14			1	1	2 .3
	15			1		1 .2
	Column Total	592 92.4	41 6.4	7 1.1	1 .2	641 100.0

Figure 3
Lie/Random Response Scale Scores (TF) vs Count of Scores > 9

LIETF	Count	LIECOUNT .00	1.00	2.00	3.00	Row Total
0		225	6			231
						36.0
1		110	3			113
						17.6
2		90	4			94
						14.7
3		55	1	1		57
						8.9
4		41	2			43
						6.7
5		28	2	1		31
						4.8
6		21	5	1		27
						4.2
7		12	3	1		16
						2.5
8		8	3		1	12
						1.9
9		2	3			5
						.8
10			3			3
						.5
11			4	2		6
						.9
12			1			1
						.2
13			1			1
						.2
15				1		1
						.2
Column Total		592	41	7	1	641
		92.4	6.4	1.1	.2	100.0

Figure 4
Lie/Random Response Scale Scores (JP) vs Count of Scores > 9

Count	LIECOUNT .00	1.00	2.00	3.00	Row Total
LIEJP					
0	164	2			166 25.9
1	148	3			151 23.6
2	96	3	2		101 15.8
3	56	3	1		60 9.4
4	45	5	1		51 8.0
5	31	4			35 5.5
6	20	4			24 3.7
7	18	2	1		21 3.3
8	7	1			8 1.2
9	7	3			10 1.6
10		1	1		2 .3
11		4			4 .6
12		4		1	5 .8
13		1			1 .2
14		1			1 .2
15			1		1 .2
Column Total	592 92.4	41 6.4	7 1.1	1 .2	641 100.0